

CLAIMS

1 - A device to prevent the extraction of an anchor screw, for an osteosynthesis element (3), where such a device includes:

- an anchor screw (2) that includes a head (4) extended by a threaded shaft (5),
- 5 ▪ and an osteosynthesis element (3) presenting a screw hole (21) for the anchor screw,

characterised in that:

- the anchor screw (2) includes, at its head, at least two securing arms (11) mounted elastically on the screw so as to occupy a retracted position under the action of a radial force, and a locking position under the action of a radial force of lower value,
- 10 ▪ and the osteosynthesis element (3) includes, on its screw hole, a section (23) placing radial constraints on the securing arms, opening downstream in the direction of engagement of the screw, in a locking channel (28), so that during the screwing operation on the anchor screw (2), the securing arms (11) initially occupy their retracted position due to the action exerted by the constraint section (23), and then their locking position by occupying the locking channel (28).
- 15

2 - An extraction-prevention device according to claim 1, characterised in that each securing arm (11) is composed of a mobile rod (13), secured to the screw (2), extending at rest more or less parallel to the axis of the anchor screw, and equipped with a locking lug (15) located opposite to the fixing point of the securing arms.

20

3 - An extraction-prevention device according to claim 1 or 2, characterised in that each securing arm (11) is mounted to extend in relation to a notch (18), created axially on the anchor screw to allow the securing arms to occupy their retracted position.

25

4 - An extraction-prevention device according to one of claims 1 to 3, characterised in that the mounting position of the securing arms (11) on the anchor screw (2) and the position of the locking channel (28) on the osteosynthesis element (3) are such that the anchor screw occupies more or less its final fitted position when the securing arms occupy their locking position.

30

5 - An extraction-prevention device according to one of claims 1 to 4, characterised in that each securing arm (11) includes an axial grasping extension (31), projecting in relation to the head (4) of the anchor screw.

6 - An extraction-prevention device according to one of claims 1 to 5, characterised in that the head (4) of the anchor screw (2) is provided with a means (7) by which it can be rotated.

7 - An instrument for the removal of an anchor screw (2), forming part of an extraction-prevention device (1) according to one of claims 1 to 6, characterised in that it includes a handle fitted with:

- 10 ▪ the means (42) to fit onto the means (7) by which the anchor screw can be rotated,
- and an unlocking device (43) that is suitable for exerting a radial force on the securing arms (11), in order bring them to their retracted position.

8 - An instrument according to claim 7, characterised in that the unlocking device
15 (43) exerts a radial force on the grasping extensions (31) of the securing arms.